



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Mark Dinsmore

Serial No.: 10/718,506 (which is a reissue application of  
6,320,932, issued November 20, 2001)

Filed: November 20, 2003

Title: MINIATURE RADIATION SOURCE WITH FLEXIBLE  
PROBE AND LASER DRIVEN THERMIONIC EMITTER

Attorney Ref.: 56249-140 (PHLL-132DVRE)

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**CERTIFICATE OF MAILING (37 C.F.R. § 1.8(a))**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail under 37 CFR 1.8(a) in an envelope addressed to Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Date: Sept. 02 2004

Elizabeth Kim  
Elizabeth Kim

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Mail Stop Missing Parts  
Assistant Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**COMBINED DECLARATION AND POWER OF ATTORNEY**  
**IN REISSUE APPLICATION**

Sir:

I, Mark Dinsmore, declare that:

1. My residence address is 85 Horse Pond Road, Sudbury, MA 01776.
2. I am a citizen of the United States of America.
3. I believe I am the original, first and sole inventor of the subject matter that is

described and claimed in United States Patent Number 6,320,932B2 (hereinafter "the '932 patent"), granted on November 20, 2001, and for which I solicit a reissue patent.

4. I have read and understand the contents of the attached reissue application, including the specification and claims.

5. I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

6. I believe the '932 patent, which matured from application Serial No. 09/748,590, filed on December 22, 2000, and which is a division of application No. 09/311,792, filed on May 13, 1999, now Pat. No. 6,195,411, to be wholly or partly inoperative or invalid by reason of my claiming less than I had a right to claim in the patent. The error includes not having claimed a flexible probe having an x-ray tube at its distal end, and including: a) a flexible optical fiber adapted for transmitting optical radiation incident on a proximal end to a distal end; b) an optical source for generating optical radiation directed to the proximal end of the optical fiber; and c) an x-ray tube coupled to the distal end of the optical fiber, including a thermionic cathode, responsive to optical radiation transmitted to the distal end of said optical fiber and incident upon a surface of the cathode to generate electrons, and an x-ray target responsive to incident electrons emitted from the thermionic cathode to emit x-rays; and d) means for accelerating electrons emitted from the thermionic cathode toward the x-ray target; wherein the beam of transmitted optical radiation has a power level sufficient to heat at least a portion of the surface to an electron emitting temperature so as to cause thermionic emission of electrons from the surface. It was also error not to have claimed a vascular probe, a brachytherapy treatment apparatus, and an x-ray treatment apparatus having these characteristics.

7. All errors being corrected in the reissue application, up to the time of filing this declaration, arose without any deceptive intent.

8. I appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Mark G. Lappin, Registration No. 26,618  
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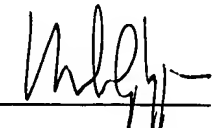
Mark G. Lappin (617-535-4043)

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10. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Date: September 02, 2004

MARK DOWSMORE by   
MARK G. LAPPIN